IN THE CLAIMS:

Please delete claims 1-24, without prejudice, and add new claims 25-48 as follows.

Claims 1-24. (Cancelled)

25. (New) A method for processing a signal in a telecommunications system, the method comprising forming a sample set from received signals and forming a set of absolute values from absolute values of sample set elements, the method further comprising:

A) arranging the elements of the absolute value set in the ascending order;

B) setting a threshold value;

C) determining the number of elements of a reference set to be formed;

D) forming a reference set comprising a predetermined number of elements of the absolute value set in the ascending order;

E) computing a reference value by multiplying the mean or median of the reference set by the threshold value;

F) comparing the greatest element of the reference set with the reference value;

G) increasing the number of reference set elements for forming a new reference set when the greatest reference set element is smaller than the reference value;

H) reiterating the preceding steps D to G until a predetermined ending condition is fulfilled;

I) forming an accepted absolute value set and a corresponding sample set by deleting the greatest element from the reference set when the predetermined ending condition is fulfilled.

26. (New) A method according to claim 25, wherein the threshold value is set according to Rayleigh distribution.

27. (New) A method according to claim 25, wherein the ending condition is fulfilled when the greatest element of the reference set is greater than the reference value.

28. (New) A method according to claim 25, the method further comprising estimating the power of the received signal on the basis of the mean of the squares of the absolute values of the elements in the accepted sample set.

29. (New) A method according to claim 25, the method further comprising estimating the power of the received signal on the basis of the sample set accepted with the Rayleigh distribution method.

30. (New) A method according to claim 25, the method being used for cancelling the interference of the received signal.

31. (New) A method according to claim 25, the method being used for separating signal-noise subspaces of the received signal.

32. (New) A method according to claim 25, the method being used for dividing the received signal into acceptable samples and samples to be rejected.

33. (New) A method according to claim 25, wherein there is an odd number of reference set elements, and the method further comprises:

forming a second reference value by multiplying the threshold value by the mean of the middlemost element and the element preceding it in the absolute value set;

comparing the second greatest element of the absolute value set with the second reference value;

deleting the greatest element from the accepted absolute value set when the greatest element of the accepted absolute value set is greater than the second reference value;

preserving the accepted absolute value set and the accepted sample set corresponding to it when the greatest element of the accepted absolute value set is smaller than the second reference value.

34. (New) A method according to claim 25, the method further comprising:

J) computing sum S of the elements of the accepted absolute value set;

K) computing number P of elements of the accepted absolute value set;

L) receiving the following sample element;

M) forming a third reference value by multiplying the threshold value by the quotient of S and P;

N) setting a forgetting parameter;

O) comparing the absolute value of the sample element with a third reference value;

P) computing a new value of S by multiplying the forgetting parameter by S and by adding the sample element value when the absolute value of the sample element is smaller than the third reference value;

Q) computing a new value of P by multiplying the forgetting parameter by P and by adding number one when the absolute value of the sample element is smaller than the third reference value;

R) handling the sample value as a deviating sample when the absolute value of the sample element is greater than the third reference value;

S) reiterating the preceding steps L to R a desired number of times or until there are no more sample elements.

35. (New) A method according to claim 34, the method comprising setting the sample element handled as a deviating sample to be zero.

36. (New) A method according to claim 34, wherein the forgetting parameter is a value between zero and one.

37. (New) A receiver comprising means for forming a sample set from received signals and means for forming a set of absolute values from the absolute values of sample set elements, wherein the receiver further comprises:

A) arranging means for arranging the elements of the absolute value set in the ascending order;

B) setting means for setting a threshold value;

C) determining means for determining the number of elements of a reference set to be formed;

D) forming means for forming a reference set comprising a predetermined number of elements of the absolute value set in the order of magnitude;

E) computing means for computing a reference value by multiplying the mean or median of the reference set by the threshold value;

F) comparing means for comparing the greatest element of the reference set with the reference value;

G) increasing means for increasing the number of reference set elements for forming a new reference set when the greatest reference set element is smaller than the reference value;

H) iterating means for reiterating the preceding steps D to G until a predetermined ending condition is fulfilled;

I) forming means for forming an accepted absolute value set and a corresponding sample set by deleting the greatest element from the reference set when the predetermined ending condition is fulfilled.

38. (New) A receiver according to claim 37, wherein the setting means for setting a threshold value are configured to set the threshold value on the basis of Rayleigh distribution.

39. (New) A receiver according to claim 37, wherein the receiver comprises means for observing that the greatest element is greater than the reference set and means for indicating that the ending condition has been fulfilled.

40. (New) A receiver according to claim 37, wherein the receiver comprises estimating means for estimating the power of the received signal on the basis of the mean of the squares of the absolute values in the accepted sample set.

41. (New) A receiver according to claim 37, wherein the receiver comprises estimating means for estimating the power of the received signal on the basis of the sample set accepted with the Rayleigh distribution method.

42. (New) A receiver according to claim 37, wherein the receiver is arranged to cancel interference of the received signal.

43. (New) A receiver according to claim 37, wherein the receiver is arranged to separate signal-noise subspaces of the received signal.

44. (New) A receiver according to claim 37, wherein the receiver is arranged to divide the received signal into acceptable samples and samples to be rejected.

45. (New) A receiver according to claim 37, wherein there is an odd number of elements in the reference set and the receiver further comprises:

forming means for forming a second reference value by multiplying the threshold value by the mean of the middlemost element and the element preceding it in the accepted absolute value set;

comparing means for comparing the greatest value of the accepted absolute value set with the second reference value;

deleting means for deleting the greatest element from the accepted absolute value set when the greatest element of the accepted absolute value set is greater than the second reference value;

preserving means for preserving the remaining absolute value set and the accepted sample set corresponding to it when the greatest value of the accepted absolute value set is smaller than the second reference value.

46. (New) A receiver according to claim 37, wherein the receiver further comprises:

J) computing means for computing sum S of the elements of the accepted absolute value set;

K) computing means for computing number P of elements of the accepted absolute value set;

L) receiving means for receiving the following sample element;

M) forming means for forming a third reference value by multiplying the threshold value by the quotient of S and P;

N) setting means for setting a forgetting parameter;

O) comparing means for comparing the absolute value of the sample element with the third reference value;

P) computing means for computing a new value of S by multiplying the forgetting parameter by S and by adding the sample value when the absolute value of the sample is smaller than the third reference value;

Q) computing means for computing a new value of P by multiplying the forgetting parameter by P and by adding number one when the absolute value of the sample element is smaller than the third reference value;

R) handling means for handling the sample value as a deviating sample when the absolute value of the sample element is greater than the third reference value;

S) iterating means for reiterating the preceding steps L to R a desired number of times or until there are no more sample elements.

47. (New) A receiver according to claim 46, wherein the receiver is arranged to set the sample element handled as a deviating sample to be zero.

48. (New) A receiver according to claim 46, wherein the receiver is arranged to set the value of the forgetting parameter between zero and one.